



Technology Plan 2011-2014

Prepared by John Wahl with the Juneau School
District Technology Committee

2010-2011

Board of Education

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Mission Statement:

In Juneau we are all partners in providing each student with the skills, knowledge, and attitudes to be a contributing citizen in a changing world.

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Introduction

The Juneau School District envision staff and students using technology to seek new knowledge, solve problems, and collaborate within a global society. The ubiquitous and transparent use of technology by staff and students supports the mission of the District, which includes helping students achieve the Alaska standards in all content areas in a way which respects the special needs and talents of each individual and enables each person to develop the skills needed in the 21st century.

Technology plays an important role in everyone's life today, and it is a dynamic industry that is in constant change. Therefore, it is critical that our educational system develops technology literacy and 21st Century literacy for all our students, enabling them to be a global citizen in a diverse digital environment.

Each school year, interested stakeholders in the Juneau Community gather together in both physical and virtual settings to develop a vision, long-range plan, goals and objectives to utilize technology to help support the instructional program in our schools, as well as enriching and extending the learning opportunities we offer our students. The following stakeholders have committed to contents of this plan:

2010-2011 Stakeholders

Glenn Gelbrich	Superintendent
Laury Scandling	Assistant Superintendent
David Means	Director of Administrative Services
John Wahl	Instructional Technology Coordinator
Phil Gouveia	Information Technology Supervisor
Tom Milliron	Principal: Floyd Dryden Middle School
Phil Loseby	Assessment Coordinator
Ray Imel	Middle School Technology Teacher
Sheryl Wittig	Elementary Librarian/Music Teacher
Jay Wyatt	<i>PowerSchool</i> Support Staff
Mark Carver	Webmaster and IT Support Staff
Administrative Council:	
Dave Newton	Director of Student Services
Patty Newman	Director of Curriculum, Assessment, and Instruction
Carin Smolin	Career and Technical Education Coordinator
Kristin Bartlett	Communications Manager
Barb Mecum	Special Projects Coordinator
Ted Wilson	Principal: Glacier Valley Elementary
Dave Stoltenburg	Principal: Harborview Elementary
Jim Hicks	Principal: Mendenhall River Community School
Margie Hamburger	Administrative Specialist: Juneau Community Charter School

Administrative Council: (Continued)

Molly Yerkes	Principal: Dzantik'i Heeni Middle School
Gary Campbell	Assistant Principal: Dzantik'i Heeni Middle School
Sarah Marino	Principal: Yaakoosge Daakahidi High School
Ryan Alsup	Principal: Juneau Douglas High School
Paula Casperson	Assistant Principal: Juneau Douglas High School
Dale Staley	Assistant Principal: Juneau Douglas High School
Dan Larson	Principal: Thunder Mountain High School
Rhonda Hickok	Assistant Principal: Thunder Mountain High School
Kathryn Milliron	Assistant Principal: Thunder Mountain High School

Public Commentary, Input, Feedback:

Sarah Day	Community Member (Juneau Empire)
Don Williams	Community Member (Greens Creek)
Kathy Blanc	Community Member (Parent)

Student Input:

Jack Garrard	Student Focus Group
Abram Leigh	Student Focus Group
Alex Soboleff	Student Focus Group
Keegan Brown	Student Focus Group

The stakeholders who are a part of the Juneau School District Technology Committee and interested parties will hold a special working meeting every January to evaluate and review the Juneau Borough School District Technology Plan.

Vision Statement

The Juneau School District envisions staff and students using technology to seek new knowledge, to solve problems, and to collaborate within a global society. The ubiquitous and transparent use of technology by staff and students supports the mission of the District, which includes helping students achieve the Alaska and World Class standards in all content areas in a way which respects the special needs and talents of each individual and enables each person to develop the skills needed in the 21st century. Technology will be used to enrich the educational experience, enhance communication and foster meaningful connections between school and work for students, teachers, administrators, parents and community members.

Current Situation and Needs

A significant amount of technology is in use across the Juneau School District. Students have more access to computers than many fellow Alaskan schools, and significantly more than other K-12 students nation wide. The school district has 3,278 computers utilized by administrators, teachers, students, and support staff. The ratio of students per computer is as follows: District average 2.69, JSD Elementary average 4.57, JSD Middle School average 3.25, JSD High School average 2.08.

Beyond the ratio of computers to students, it is clear that the district is trailing behind the needs of today's modern workplace. Outside of school, students enjoy proficiency in technology which businesses are quickly realizing will define the workplace of tomorrow: social networking, online community, asynchronous collaboration. Yet, the most widely used examples of these tools are not integrated into Juneau's classrooms or are blocked by the district's Internet access policy. The Juneau School District needs to provide a framework and capacity for online collaboration within the confines of its existing Internet access policy.

Efforts to upgrade classroom and infrastructure technology and practice are affected by budget and organizational challenges. Due to budget constraints for the 2011-12 School Year, the Instructional Technology Coordinator position will be cut, and the duties of coordinated vision, planning, implementation, staff development, and evaluation will fall under the duties of the Assistant Superintendent. Additionally, the role of individual site technicians will be consolidated and centralized under the role of the Information Technology Supervisor. Currently there are six centralized information technology support staff with 10 individual site technicians. The new model will have a total of 12 centralized technology support staff for the entire district under the direction of the IT supervisor.

Furthermore, due to a reduced budget, the Juneau School District has limited capacity for systemic, long-term educational technology planning. The majority of new technology funding comes from school renovation funds which are not recurring and don't allow the district to replace technology on a regular cycle. Other funding sources, including grants, pay for particular items and are limited in scope. Some purchases are made in isolation and aren't always aligned to the strategic vision.

Pending an effort to replace obsolete computers throughout the Juneau School District, a Board of Education 2011 Capital Funds Needs request for (xxxxxx) has been submitted for consideration by the legislative delegation. Additionally, two sites (Gastineau Elementary and Auke Bay Elementary) have been approved by the community for renovations. These sites will utilize their furnitures, fixtures, and equipment (FF&E) funds to address their technology infrastructure and hardware/software needs. However, the Juneau School District Technology Committee recommends the Budget Working Committee create an action plan that comprehensively address a refresh cycle. During the first few years of this action plan, budget amounts will vary based on the age of hardware assets in the inventory, but eventually, a fixed amount per year should be agreed upon and designated in the General Operating Fund.

The Juneau School District serves nearly 5000 students throughout seventeen locations including three high schools, two middle schools, six elementary schools, one elementary charter, one correspondence program, one K-8 Montessori program, and three classrooms in youth group homes. Each site employs a unique model for integration from one-to-one laptops for a part or whole of the student population, dedicated technology labs for specific functions or general technology integration, mobile labs, pods of computers in classrooms, general use computers in libraries, assistive technologies, and mobile devices. In 2010, the Juneau School District

Technology Standards Ad Hoc Committee identified a digital projector and a document camera integrated with a teacher computer (ideally a laptop) as a baseline for the minimum technology tools with which every classroom should be equipped.

An online student information system, PowerSchool, is in use to keep track of student achievement, attendance issues, and general student information. At the secondary level, the student information system includes a parent and student portal whereby information can be monitored for attendance, assignments, assessment history, grades, and notifications. PowerSchool also integrates with the lunch program allowing parents to track balances and receive updates. Parents and students can sign up for an e-mail notification related to District topics, school-wide events, and other related announcements. At the elementary level, parents and students can monitor grade history, assessment history, and attendance.

To satisfy current communications needs, and to begin the process of integrating modern web technologies (aka "Web 2.0") into the classroom, the district has implemented a modern web services infrastructure. Instead of a collection of discrete, hard-to-maintain static web pages; a dynamic, network-integrated, database driven web services platform that allows for the publishing of various types of content by various users has allowed the district proper control over dissemination and online community. The district has implemented a content management system for its district-wide website and is in the process of changing site-based websites over to the same system. The content management system (CMS) has afforded the following benefits:

- Staff no longer need to be trained to use complicated software like Contribute or Dreamweaver, just to navigate and edit content on the website itself;
- Saved money on staff training and software licenses;
- Content and layout are separated, allowing regular users to work with content, and the web-programmer to work with layout;
- A single webmaster role has been strengthened by a distributed group of content managers and various other groups with security permissions to edit or view only defined areas;
- Staff update individual pieces of content, not entire pages, which removes the risk of broken pages and inconsistent formatting;
- Content is stored in a database, not static HTML files, and thus is portable and can be accessed from other database-linked programs (FileMaker, Excel, Powerschool, Alio);
- Content can be moderated before it gets published to the world;
- Content can be automatically published/unpublished by predefined date/times;
- Has laid the framework for deploying Web 2.0 technologies to the classrooms like wikis, blogs and micro blogs, online collaboration, electronic surveys, interactive knowledge base, social networking, instant message, and multimedia streaming;
- Helps establish a place to compile district- or school-wide knowledge base;
- Gives teachers and students a place to begin building online community.

The Juneau School District has chosen Drupal's CMS for the following reasons:

- Extensible, industry standard platform (PHP/SQL);

- No software license fees;
- Numerous "#1 Open Source CMS" awards;
- Large developer community;
- Large collection of freely-available modules (calendar, wiki, blog, profile, etc);
- Large collection of freely-available graphical themes;
- Excellent codebase and overall implementation design.

As a result of this new website infrastructure, the Juneau School District has been able to improve communication to teachers, students, parents, and the community with timely information about:

- District-wide events
- District-wide contact information
- Parent feedback from the McDowell Survey
- School status updates related to inclement weather
- Important messages related to the budget, School Board Meetings, press releases, job announcements, and the Superintendent
- Digital resources available to staff, students, and parents
- the 5-year Strategic Plan with regular updates on the progress of each initiative

The website also allows users to subscribe to RSS feeds related to content that is updated regularly such as news feeds, the strategic plan, and announcements.

To meet the goals of this plan, the JSD Technology Team pledges to establish district-wide standards for hardware, software, and building infrastructure. The team will continue to meet annually during the school year to establish and revise these standards and monitor progress and will include a schedule of maintenance and upgrade. The outline for those standards is as follows:

Network Services

Servers

- Provide adequate support staff for specific server software/hardware maintenance
- Provide a coordinated, adequate server backup system and policies, including off-site storage
- Establish secure access and login policies/procedures;
- Provide secure off-site server access;
- Maintain robust hardware with a minimum configuration

Faxes/Copiers/Scanner/Printers

- This plan promotes a migration to an all-in-one networked solution when possible

Work Stations

- Workstations need to be adequate for designated purposes and meet district goals for security and efficacy.

WAPs (Wireless Access Points)

- Wireless access points need to be pervasive, with 24x7 fully integrated access, meeting district goals for security and efficacy.

Building Infrastructure Strategies

In advance of the finalization of any construction or renovation plans, the JSD Technology Support Team in coordination with the JSD Maintenance and Facilities Planner will develop standards for the following systems:

Electrical

- Provide adequate electrical outlets and circuits for new network and other technology infrastructure whenever possible during renovation building upgrades
- Provide for potential growth (laptop support) and movement of computer labs especially for new buildings and through renovations.

Network cabling

- Determine which sites need additional network drops for wired and wireless access
- Work with the Facilities Planner to develop district wide policies for building network infrastructure wiring that incorporates fiber optics as the backbone standard for new building and as part of renovation projects
- Require that contractors adhere to IEEE network cabling standards (length and appropriate type)

Ethernet switches (wire and wireless)

- Eliminate all repeaters and replace with adequate wiring or Ethernet switches
- Ethernet switches must meet industry standards
- Bring all switches up to a minimum 10/100/1000BaseT
- Provide for consistency of manufacturer/vendor across the district.
- Purchase switches that are capable of POE (power over Ethernet) whenever applicable.

Routers

- Apply standardization to all routers (Cisco or equivalent); and
- Assure that the district meets continuing access needs (intra/internet).

Firewalls

- Firewalls must meet industry standards
- Are adequate to protect student and staff by use of content filtering and anti-spam/virus protection.

Internet access point and devices

- Establish security for internet access points.

Uninterruptible Power Supply

- Provide UPS devices wherever applicable for all communication closets components;
- Determine a battery replacement schedule and upgrades of UPS units
- Assure that UPS standard up time is varied by application.

Climate control

- The Juneau School District Maintenance Department will assure that new technology infrastructure is wired separately from energy conservation controls.
- In addition, climate control is adequate for protection of equipment

Physical access to secured area

- The Juneau School District Maintenance Department and administration will assure that all communication closets have established policies for access and security.

Miscellaneous

- Standards and policies established for network devices should apply to any other miscellaneous technologies as much as possible. There are other groups of building infrastructure devices, for example: Outside Access Security (Doors), reader boards, and other miscellaneous technologies, which interface with the JSD network.

Progress Update

The following are initiatives in progress or completed as a result of our Technology Needs Assessment performed by SERRC during the 2008-09 school year.

- Gigabit Port Upgrade Initiative: Riverbend and Floyd Dryden are not completed.
\$105,600 were requested for FY12 to complete the project.
- Completed District-wide inventory of computer assets.
- Installed UPS in the Marie Drake Data Center
- Centralized computer purchasing for the District
- Provisioned and deployed 20Mb Internet access replacing 13 residential quality cable modems.
- Deployed an online Work Order ticket system to track and quantify IT work requests
- Reclassified a Computer Technician position to a Server Technician in line with the SERRC Report's Organizational Recommendations
- Started work on a replacement schedule for the District's computer assets
- Wireless infrastructures were designed and deployed at JDHS, Harborview, Floyd Dryden, Dzantik'i Heeni and Glacier Valley
- Replaced the District's static HTML based website with an open source Content Management System (CMS)

- Moving District services to Virtual Machines is underway
- A centralized backup system was purchased and deployed

The following are initiatives to be completed during the cycle of this three-year technology plan within the Information Technology Division.

- Move to Microsoft's Active Directory to manage all computers and users in the District;
- Consolidate six of the ten existing Site Computer Technicians into a unified support system;
- Provision the renovations of Gastineau and Auke Bay with VOIP, wireless and network connectivity;
- Migrate to Google Apps for Education for e-mail, calendaring, collaboration, documents, and other services for staff and students;

Teacher, Student, and Community Feedback

A survey distributed to staff members during the 2010-2011 school year identified the following barriers to the acquisition or usage of technology: *(Full copy available in Appendix D)*

- Lack of time in the schedule for learning/using technology
- Lack of money to purchase new technologies
- Inadequate hardware to incorporate the technology integration desired by the instructor
- Lack of training/professional development
- Lack of technical support when the tools do not work as they should
- Inadequate software to incorporate the technology integration desired by the instructor

A student focus group and general survey identified the following as benefits of increased access to technology in the Juneau Borough School District:

- Provides a medium to becoming a self-learner
- Sometimes it's easier to create school projects
- Users can create sophisticated products
- Users can produce a better quality product
- Most students feel more organized using a computer for their work
- Users have access to more information

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- Provides a medium to becoming a self-learner
- Sometimes it's easier to create school projects
- Users can create sophisticated products
- Users can produce a better quality product

- Most students feel more organized using a computer for their work
- Users have access to more information

The student focus group identified the following as improvements they would like to see in accessing technology in the Juneau Borough School District:

- Access to some blocked applications that would allow users to learn computer programing and application development
- Access to legitimate educational websites that are blocked due to managing bandwidth
- Timely updates to software applications and upgrades to newer versions when available

The student focus group identified the following as a barrier in the usage of technology:

- Teachers limiting the use of technology in the class; i.e. what software will and won't be used.

In the forum and opportunity for public comment/feedback on some of the goals of the JSD Technology Plan, the following themes came up:

- Technology should be used in all classes
- Students need to learn how to write content for some of the emerging digital media (websites, blogs, Twitter, and other media)
- Staff training is imperative in successful implementations
- Instructor buy in is important to the success of the program
- Technology is an engaging tool for students and they should have access to it for such projects as: research, digital storytelling, multi-media, movies, wiki's, and other Web 2.0 technologies
- All staff needs to be shown how to use it in the classroom and in their teaching
- There are a lot of free resources available to teachers that can enhance teaching and learning such as: Kahn Academy, Free Rice, Prezi, Wordle, Google Apps, wikispaces, Glogster, Google Earth, Teachers Domain, Discovery Education,
- Teachers and students should be proficient in word processing and spreadsheets at the absolute minimum
- Increase access to mobile devices at Middle School and Elementary School levels.

The above feedback was taken into account and incorporated into the goals, objectives, and action steps of this technology plan where appropriate.

(A) Goals, Standards, and Strategies

Academic Achievement & Technology Literacy Goals

Element: *The district will set specific and measurable goals, aligned with state academic content and performance standards, for using advanced technology to improve student academic achievement.*

Acceptable Criteria: *Goals address specific state content and performance standards across several areas, not only educational technology. Goals are clear and measurable and targeted at student achievement in content areas.*

The Juneau Borough School District will continue to set specific measurable goals, aligned with state academic content and performance standards for using advanced technology to improve student academic achievement. This will include developing strategies for improving academic achievement and technology literacy for all students. We will continue to update our strategies for using information technology and telecommunication to improve education and or library services.

Measurements of achievement are listed as action steps/indicators under each goal below.

Curricular and Instructional

Strategic Plan

In an effort to raise student achievement across a number of content areas and meet the goals outlined above, the Juneau Borough School District has adopted the following [Strategic Plan for 2010-2014](#). Each strategy is linked to the JSD Website where progress updates of goals and actions can be found:

Student Achievement

1. Align grade level core standards in math and literacy with world-class goals in mind. ([Link to the progress update](#))
2. Implement an assessment system that informs instructional practice. ([Link to the progress update](#))
3. Engage all staff in the study and use of effective instruction and intervention strategies for all students. ([Link to the progress update](#))
4. Provide support systems to implement instructional programs with fidelity. ([Link to the progress update](#))

Highly Qualified Staff

5. Create a coordinated professional development system that is responsive to achievement data, aligns with school and district improvement efforts, and maximizes the investment of district resources. ([Link to the progress update](#))
6. Study and practice leadership behaviors that are linked to increases in student success. ([Link to the progress update](#))
7. Strengthen our human resources strategy with improved hiring, orientation, training, feedback, and evaluation processes. ([Link to the progress update](#))

Community Commitment

8. Strengthen community partnerships to enhance relevance in career technical programs, service learning, civics education, and across the curriculum. ([Link to the progress update](#))

Culture of Service and Support

9. Develop and implement a service culture and efficient system of support at the District Office. ([Link to the progress update](#))

State and Local Standards

The Juneau School District uses the Alaska Content Standards to guide the creation of district curriculum and district core content documents. Additionally, National and International Content Standards have become a foundation for re-alignment of Juneau School District Language Arts and Mathematics standards. While a separate curriculum currently exists for Technology in the Juneau School District, since 1996, technology-related content standards have been integrated into the Mathematics, Language Arts, Science, and Health Curriculum. A complete set of the Juneau School District Curriculum Content can be found on the following Web page:

http://www.juneauschools.org/district/instructional_services/curriculum

The following are some examples of technology integration into Math, Language Arts, Science, and Health:

- “type 25 wpm with 90% accuracy, using correct techniques” (Language Arts)
- “compare a variety of resource materials, including electronic media, to select the most useful to purpose” (Language Arts)
- “model data, by hand and by using technology, using pie charts, scatter plots, and histograms with appropriate scale” (Math)
- “record data into a spreadsheet matrix” (Math)
- “use technology to collect, summarize, analyze, interpret, and display evidence” (Science)
- “demonstrate understanding of the importance of values and consequences as well as information when making decisions about science and technology.” (Science)

- “Evaluate the impact of technology, including media, on personal, family, and community health .” (Health)
- “Apply concepts of personal online safety and cyber-security, and demonstrate awareness of the concepts of cyber-bullying, predator identification and homeland security.” (Health)
- “Apply concepts of cyber safety including privacy and the Internet, cyber relationships, intellectual property, malicious code, and social issues.” (Health)

Additionally, the Juneau School District Board of Education adopted educational goals for 2008 - 2013. These goals are listed in Appendix A.

Element: *The district will develop strategies for improving academic achievement and technology literacy of all students.*

Acceptable Criteria: *Specific strategies will be identified to improve academic achievement and technology literacy of all students. Specific strategies will be identified for assessment of technology literacy on an annual basis for at least at 8th graders.*

Technology Plan Goals:

Goal: The current Juneau School District Technology Curriculum is revised to reflect alignment with International Society for Technology in Education National Educational Technology Standards for Students. (ISTE NETs)

Action Steps:

A) The Technology Curriculum Review committee will begin the work of revising JSD Technology Curriculum during the remainder of the 2010-11 School Year with a goal for adoption during 2011-12 School Year.

B) The revised curriculum will establish 8th grade technology literacy standards and a mechanism for performance-based assessment and reporting to students, parents, the District, and the State.

Indicators:

1. Revised curriculum sets clear benchmarks at primary, intermediate with clear targets for 8th grade technology literacy, and is accessible to all staff, students, and parents.
2. Revised curriculum is performance based and allows for efficient reporting to interested stakeholders.

3. The revised curriculum takes advantage of Web 2.0 technologies to adapt available resources towards meeting the goals of the student performances.
4. Revised curriculum aligns with 21st Century Learning standards.
5. The 8th grade technology literacy standards provide a baseline for how technology integration can be enhanced at the high school level.

Goal: Technology is integrated into the core Math and Literacy standards with world class goals in mind in order to raise student achievement.

Action Steps:

A) Align the available JSD Technology resources and online resources to the adopted core Math and Literacy standards. Utilize the JSD Website as a “hub” for dissemination of resources.

B) Web 2.0 Technology tools will be utilized to collaborate and develop resources within the Professional Learning Communities (PLC) framework for raising student achievement in mathematics, reading, and writing.

Indicators:

1. Core Math and Literacy standards are available to all staff, students, and parents with appropriate links to digital instructional resources that can be utilized for whole group, small groups, and/or individuals to introduce, develop, instruct, reinforce, and/or review the standards.
2. The JSD Website and infrastructure are utilized to ensure digital resources are dynamic and that content is added/changed on an ongoing basis.

Element: The district will develop a strategy for using information technology and telecommunication to improve education.

Acceptable Criteria: Description of how E-rate funds will be used to improve education through information technology and telecommunications.

Communication and Information Access

Goal: The Juneau School District’s network services and building infrastructures will be a sufficient mechanism for planning and providing access to information from local and global sources.

Action Steps:

A) The technology support team will continually assess our long-range plans and implementations for improving network connectivity.

B) The technology support team will continue to monitor and implement systems adjustments to improve the speed and capacity for Internet access.

C) The District will commit to assuring robust bandwidth access.

Indicators:

1. (Intermediate indicator) Surveys will show teachers are satisfied with the access, availability, and download speeds of sites that utilize streaming audio and/or video.

2. (Advanced indicator) Surveys will show all users are able to access digital resources, including streaming media, in a timely matter.

The Juneau School District will continue to utilize E-Rate funds to support telecommunications throughout the district. Currently, funds support improved Internet access services in libraries, classrooms, and computer labs as well as VOIP phone services in Central Office and some secondary education sites. VOIP phone services improves communication both internally and externally by providing direct lines, voice mail services, and Internet access to voice mail leading to more efficient communication of all necessary parties in the educational field. As additional sites change over to VOIP services, E-Rate funds will continue to support this telecommunications service.

(B) Technology Integration

Curricula and Teaching Strategies: Relevant Research

<p>Element: <i>The district will use curricula and teaching strategies that integrate technology effectively leading to improvements in student academic achievement that are based on a review of relevant research.</i></p>

<p>Acceptable Criteria: <i>A description of our process to use research-based practices to integrate technology (includes citing the research).</i></p>

<p>Element: <i>The district will use curricula and teaching strategies that integrate technology effectively leading to improvements in student academic achievement that are aligned to the Alaska State Content and Performance Standards</i></p>

<p>Acceptable Criteria: <i>A description of our process to select appropriate Alaska State Content and Performance Standards not only the technology content standards</i></p>
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As research has shown (see Appendix B, *Understanding Multimedia Learning*), student learning is enhanced by multimedia instruction. The power and promise of technology is based on the need for technological literacy - the ability to use, manage, and understand technology. In order to ensure technological literacy, it is critical to develop technology skills and concepts at every grade level, beginning in kindergarten and continuing each year through high school.

The Technology Committee recognized the importance of adopting the Alaska Content Standards in Technology, and our current Technology Curriculum is based on those standards. The District also see the need to update our curriculum to align with ISTE's National Educational Technology Standards for Students and support technology performance indicators at each development level for our students. Teachers and administrators must be prepared to integrate technology into all educational areas and state standards in order to meet the diverse needs of students and take advantage of the expanded knowledge bases, instructional strategies and communications skills afforded by technology.

Juneau School Board Policy is explicit that during the Juneau School District curriculum review process, district committees evaluate supplementary, support, and intervention technology programs available to enhance and improve student achievement. The district also checks for alignment with Alaska Content Standards and Grade Level Expectations where applicable. The district relies on the "What Works Clearing House" Website for initial review of proposed programs and the rate of effectiveness scale to determine if further research is necessary. Programs must have positive effects or potentially positive effects in order to be implemented district wide. In cases where effects are inconsistent, further research by the committee must commence before the program can be implemented. The committee can either elect to do a pilot with a random population and compare outcomes with a control group, monitoring outcomes with pre and post assessments, district local assessments, and the State's standard based assessments. If the program shows positive effects or potentially positive effects in the district case study, the committee can make a case to implement such program on a site or district level. The decision to implement such programs will reside with site principals and/or the Juneau School District Board of Education.

In addition to the "What Works Clearing House" Website, the following resources have also been identified as valuable tools for locating research-based practices and guidance in technology integration :

- 2010 Horizon Report, <http://wp.nmc.org/horizon2010/>

The annual *Horizon Report* describes the continuing work of the New Media Consortium's Horizon Project, a qualitative research project established in 2002 that

identifies and describes emerging technologies likely to have a large impact on teaching, learning, or creative inquiry on college and university campuses within the next five years. The *2010 Horizon Report* is the seventh in the series and is produced as part of an ongoing collaboration between the New Media Consortium (NMC) and the EDUCAUSE Learning Initiative (ELI), an EDUCAUSE program.

- Apple Professional Development and trainers: applying best practices in technology integration from model schools across the nation.

- ISTE's Center for Applied Research in Educational Technology (CARET), <http://caret.iste.org/index.cfm>

CARET bridges education technology research to practice by offering research-based answers to critical questions in topics such as student learning, curriculum and instruction, and professional development.

- Guiding Documents for technology integration:
 - [ISTE National Educational Technology Standards for Students](#) (NETS*S)
 - [Partnership for 21st Century Skills](#)
 - [21st Century Fluency Project](#)
 - [Alaska's Educational Technology Plan](#)
 - [National Educational Technology Plan](#)
 - [Revised Bloom's Taxonomy](#)

Element: The district will use curricula and teaching strategies that integrate technology effectively leading to improvements in student academic achievement that will lead to improvements in student academic achievement

Acceptable Criteria: A description of our process to identify the measures that indicate improvements in student academic achievement.

The Juneau School District will utilize on a wide variety of assessment tools to measure the effectiveness of technology integration programs implemented with student achievement as the goal. The assessment tools include Alaska's Standards Based Assessments for grades 3-10, fall, winter, and spring Interim MAP scores for K-10, and the developmental profile and PALS for K, 1, 2. The District will pay close attention to the effectiveness of programs especially with those struggling to meet AYP, such as Alaskan Natives, students on IEPs, English Language Learners, and economically disadvantaged. The district will not support programs that have a negative effect, potentially negative effect, or no discernible effect in student achievement.

Special Projects

Fast ForWord, a computer-assisted language and learning skill program is intermittently in use at some K-12 schools in the district. Data analysis studies, conducted by the assessment coordinator and data analyst, have found this program to be quite successful in raising student achievement in reading and other content areas.

SuccessMaker, a computer assisted Mathematics program is currently in use at Floyd Dryden Middle School, Dzantik'i Heeni Middle School, Juneau-Douglas High School, and the Yaakoosge' Daakahidi Alternative High School. It is used as an intervention tool for students who are below grade-level standards.

PLATO, a web-based integrated learning system, is currently available for high school students at JDHS, TMHS, YDAHS, and Johnson Youth Center. It supports students during the school year and summer school in Mathematics, Language Arts, Science, and Social Studies. It is used as both a credit recovery aid and support for HSGQE test preparation .

Apex Learning, utilized at JDHS to increase Advanced Placement course offerings, provide authorized AP curriculum to classroom teachers, and ensure students are well prepared to achieve on the critical AP exams. Apex Learning courses are authorized by the College Board AP Course Audit.

Consortium for Digital Learning (also known as the 1 to 1 Laptop Initiative) is being fully implemented at Yaakoosge' Daakahidi Alternative High School (YDAHS), and implemented among the 9th grade smaller learning communities at Juneau-Douglas High School and Thunder Mountain High School. YDAHS was recognized as an Apple Distinguished School 2 years in a row during the 2008-9, and 2009-10 School Year. The program is funded by the Alaska Association of School Boards and the Juneau School District. YDAHS finished the grant funding period and is operating independent of the CDL as a sustainable program. This site-based program provides a laptop for every teacher and student. The program provides staff development, engineering hardware and software support. It encourages the use of multi-media applications and technology integrated student projects. It also encourages enrollment in distant education courses available online in order to meet graduation requirements and/or fulfill electives.

Destiny, a web-based library system implemented in the Fall of 2005, is used at all elementary, middle, and high schools. This library system enhances student and staff access to JSD libraries by using tools, which align collection resources with curriculum.

Career and Technical Education:

Various teachers throughout the district integrate video projects in their classes in a variety of ways, challenging students to explore and expand thinking and as a method for communicating with parents. All media and/or technology students learn to produce movies using such software tools as iMovie, Flash, and other applications. These tools may be integrated into student presentations and projects in core content classes.

- Dzantik'i Heeni Middle School students have been using closed circuit broadcasting for 16 years and students produce movies as part of project-based learning units in core content and exploratory classes.
- Floyd Dryden Middle School students utilize a closed circuit cable system, broadcasting daily morning announcements that they produce, film, edit, and anchor. In addition, they do the same for "Special Reports" that are broadcast on Channel 6.
- Juneau-Douglas High School also is partnering with KTOO and KATH to involve students in radio and television broadcasting. JDHS Video Club has utilized students to broadcast several sporting events such as the Region V Basketball Tournament and the Annual Gold Medal Basketball Tournament with the use of their on-site television broadcasting studio.
- Juneau-Douglas High School Engineering Lab includes Autodesk/Revit design software and state-of-the-art equipment supporting CAD and the National "Project Lead the Way" program.
- Thunder Mountain High School has incorporated a state-of-the-art animations digital lab in order to offer integrated digital arts courses. The class introduces students to animation software tools used by professionals in the 3-D animation workforce using MAYA and Mudbox. Students learn the skills needed to create three-dimensional digital animations, and have the opportunity to work with a variety of animation techniques .
- TMHS utilizes ESRI software for GPS/GIS applications.
- TMHS utilizes the national Infinity Project software for digital engineering developed by Southern Methodist University.
- Both JDHS and TMHS have business/finance software and web-design/publishing programs as well as digital photography.

Read & Write Gold, is an assistive technology literacy software solution that allows students to access any curriculum and complete reading, writing, and research assignments as well as take tests independently. It is primarily used with our special needs populations.

Concluding Remarks

When educators use the accumulating knowledge regarding the circumstances under which technology supports the broad definition of student achievement, they will be able to make informed choices about what technologies will best meet the particular needs of their classroom and students.

They also will be able to ensure that teachers, parents, students, and community members understand what role technology is playing in a school or district and how its impact is being evaluated. Finally, they will be able to justify the investments being made in technology.

The need to graduate students who are technologically literate has increased to the point where those who have that knowledge are at a considerable advantage over those who do not. Furthermore, the technologies available to help teachers increase student achievement of standards are critical to district improvement efforts. Innovative use of technology to foster student achievement can be built from the ground up by rewarding teachers who are invested in the process and have the ambition to apply best-practices in technology integration in their classroom.

Element: The district will use curricula and teaching strategies that integrate technology effectively leading to improvements in student academic achievement that include a timeline for integration.

Acceptable Criteria: The timeline details the actions to be taken throughout the length of the plan to integrate technology in core curriculum.

Goal: Provide sustainable district-wide support for innovative and effective uses of technology to improve student achievement.

Action Steps:

A) Establish and utilize the technology integration budget as a source for teacher mini-grants to provide as funding for innovative uses of technology in the classroom. The Office of the Assistant Superintendent will work with the Office Instructional Services to establish guidelines for submitting proposals including maximum amount awards.

B) Require teachers who utilize the funding to be a part of an action-research course which develops an essential question, collects and analyses data in response to the question, and disseminates the information district-wide.

C) Budgeted amount for school year 2011-2012: \$35,000.

Indicators:

1. A cadre of instructors are applying best practices with innovative tools, conducting action-research to measure the effectiveness of their practices, and providing a model for potential system-wide impact.
2. Multiple data sets are collected to be analyzed for effectiveness of innovative technology integration practices.

Timeline:

- Spring of 2011: Application requirements and guidelines provided to teachers; submissions due with letter of support from Principal; partner with the University of Alaska Southeast (UAS) to structure an action research course;
- June of 2011: Applications reviewed and selected for innovative projects based on guidelines and potential for raising student achievement with emphasis in Literacy and/or Mathematics; potential applicants must agree to the conditions and additional requirements of the award if they are selected; administration finalizes the course with UAS;
- July of 2011: All applicants informed of their mini-grant status; successful applicants may place order; successful applicants may also leverage more funding from their site, PTO group, fundraising efforts, etc. to maximize quantity of innovative tools.
- August of 2011: Prior to the start of school, all successful applicants attend a workshop for initial training, gain an understanding of guidelines, gain an understanding of final outcomes and expectations of the mini-grant award, enroll in action-research course, agree upon schedule for bi-monthly face-to-face meetings and introduction to the Web tool to use for virtual, asynchronous meetings/discussions.
- 2011-2012 School Year: mini-grant participants conduct their project and action research making adjustments as needed based data collected along the way in formative (teacher developed and State-wide resources such as ACFA and Anchorage's Test Item Bank), interim (MAP assessment), and summative (Alaska Standards Based Assessment) data.
- Spring of 2012: Initiate another round of available mini-grants based on any carryover and budgeted amount in 2012-13 school year. (Repeat steps listed above for second cadre during 2012-13 School year).
- May of 2012: Participants complete all requirements of the mini-grant, participants share initial results with the Administration; further analysis of results can be compared once SBA Data is verified and desegregated.
- Fall of 2012: Administration evaluates effectiveness of innovative strategies for potential system-wide initiatives and budget implications for 2013-14 School Year.
- Spring of 2013: Upon review of effectiveness of the innovative strategies implemented in each mini-grant wave, Administration team adjusts conditions of the mini-grant application as needed in coordinating a third wave of mini-grants for 2013-14 school year.
- Fall of 2014: Administration evaluates effectiveness of second cadre for potential system-wide initiatives and budget implications for 2014-15 School Year.

This part of the plan addresses a number of themes raised by teachers, students, and community input. Technology integration into the core curriculum will occur with support for the necessary resources, staff-buy in and capacity building with research and development, use of technology in innovative ways, and system-wide potential with results and advocates to back it up.

(C) Access

Increase Access for All Students & Teachers

Equitable access to technology for all students is one of the imperatives of this technology plan.

In terms of access, the 2011-14 Juneau School District Technology Plan aims to :

- Provide equitable access for all technology users, enabling them to collaborate and communicate from a variety of technologies in a learning environment.
- Create and maintain a secure networking environment.
- Coordinate and encourage use of laptops for teachers
- Plan infrastructure for increasing numbers of mobile devices able to connect to the Internet
- Plan technology for indigent and ADA populations .
- Regular upgrade and maintenance of the network infrastructure
- Implementation of a secure wireless scheme for every site within the Juneau School District.
- Review network infrastructure, telephones, wireless and other systems and upgrade accordingly.
- Ensure that all technology assets are included in the inventory work-order system.
- Ensure that all new and renovated buildings follow standards set previously in this plan.

Element: *The district will ensure all students and teachers have increased access to educational technology in all schools.*

Acceptable Criteria: *Description includes how Ed Tech (Title II-D) funds will be used to help students in high-poverty and high-needs schools, or Title I schools in school improvement status (identified as level 2 or above). Provide data for high-poverty or high-needs schools or an explanation if it is not relevant.*

The Juneau School District will utilize its Title II-D funds to ensure teachers maximize their technology integration potential at their site. The funds will be used to assist in the costs of the Professional Development Goals and Action steps. The funds will assist with the cost of substitutes for technology integration workshops and trainings designed to improve instructional technology integration practices at the elementary and secondary level. The funds will also be utilized to help develop a cadre of Technology Integration experts. Title funds will be used to support technology interventions and after-school programs at elementary schools for literacy, mathematics, and science support. The Director of Curriculum, Instruction, and Assessment ensures that teachers in Title I schools have the necessary training to engage all students in rigorous, relevant, and meaningful educational technology activities. The secondary librarians, secondary coaches, and teacher technology integration experts cadre will provide

leadership and mentoring at their respective sites and assist teachers in implementing the integrated technology curriculum into the content areas of language arts, social studies, math, and science. The elementary instructional coaches will also play a vital role in coaching, mentoring, and modeling to enhance instructional practices at the classroom level (including technology integration); raise the level of student achievement; and strengthen teacher confidence in meeting the needs of diverse learners.

Element: *The district will encourage the development and use of innovative delivery strategies through the use of technology.*

Acceptable Criteria: *Description of strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distance learning technologies, particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources.*

In addition to pursuing the goal of Digital Equity, the Juneau Borough School District is committed to harnessing the power of emerging technologies to provide innovative delivery strategies to meet the diverse needs of our students. Some of these technologies, such as interactive white boards and other digital devices, are utilized in traditional classroom settings.

The Juneau School District has developed the HomeBRIDGE program as a home school program to local families who need a flexible, individualized alternative for their K-12 student. Students enrolled in HomeBRIDGE may take advantage of the course offerings at their respective school, make use of the services of a certified teacher in the Family Learning Center, as well as the flexibility to received approved distance learning courses and/or pre-approved Curriculum from outside vendors. In order for High School Students to take advantage of the specialized courses, they must first meet with their counselor who would make a recommendation to the HomeBRIDGE program if the desired course was not available at Juneau Douglas High School. The HomeBRIDGE staff would then assist the student in finding an appropriate distance course delivered on-line that would satisfy the graduation requirements. The Juneau School District also offers UAS College Connection, that is a partnership between the Juneau Douglas High School, Thunder Mountain High School and the University of Alaska Southeast. The UAS College Connection is a dual enrollment program created for school district students who seek the challenge of college instruction. These students have either exhausted school course offerings, have shown solid ability and/or are highly topic-focused. Qualified high school students, 16 years of age and older may enroll in one or two UAS courses per semester while still in high school.

The Juneau Borough School District is a partner with the Alaska Learning Network and will utilize this resource to both develop and deliver courses of instruction. The goal of the Alaska Learning Network is to provide students and teachers with a comprehensive range of fundamental, advanced and specialized online learning tools by:

- Providing ongoing technology coaching and support to teachers
- Creating and distributing e-courses teachers can download, customize, and deliver
- Creating and delivering high school e-courses taught by AkLN staff
- Developing and populating a comprehensive database of online courses aligned with Alaska content standards and relevant to teachers and students throughout the state.

Element: *The district will ensure effective use of technology to promote parental involvement and increase parent communication.*

Acceptable Criteria: *Description of strategies to promote parental involvement and increase communication with parents.*

The Juneau School District will implement a number of strategies to promote parental involvement and increase communication with parents. The JSD Communication Plan is currently being carried out by the Communications Manager. One of the strategies in the plan is to improve the district and site websites to ensure timely updates, promote dynamic content, and streamline and standardize the navigation and interface across the district. While the district website provides parental access to curriculum, parent resources, and district-wide information, school sites communicate with parents about any special programs, course offerings, staff contact numbers and e-mail addresses. Individual staff members can also host a Website on the district's server to communicate more specific information about their classroom, assignments, syllabus, guidelines, policies, and the like. In addition, Juneau School District's staff have been trained in using e-mail to communicate with parents through the use of mailing lists or individual correspondence. Mailing lists typically describe the homework assignments and/or projects students need to complete, while individual correspondence details the specific progress of a particular student. Another important tool used in improving communication and parent involvement is "School Messenger" which provides timely announcements via phone services.

Additionally, the district uses its student information system, PowerSchool, to facilitate further opportunities for parental involvement in students' educational achievement. Parents are able to monitor their student's attendance, progress, assignments, and grades within a Web browser. Additionally, parents of high school students can monitor their child's graduation credits. Parents are also able to e-mail teachers from the PowerSchool connection.

Initiative 8 in the aforementioned JSD [Strategic Plan](#) has a number of action steps to enhance community and family involvement in schools including:

Strengthen the district's volunteer program

- Review other school district volunteer screening and engagement practices;
- Create volunteer handbook for schools;
- Inventory existing formal and informal volunteer resources;
- Develop electronic volunteer network bulletin board for each school website;
- Communicate internally and externally the volunteer program guidelines and share resources and celebrate volunteers;

Increase home and school connections

- Host parent information events on topics such as PowerSchool;
- Expand use of district website and school websites;
- Train staff of School Messenger system;
- Pursue the establishment of a central School District Help Line;
- Expand connections through Community Schools activities;
- Monthly information on literacy in parent newsletters

A copy of the updated policy and guidelines for parent/family/community involvement is included in Appendix C.

Element: *The district will describe how its schools will develop technology-based programs in collaboration with adult literacy services.*

Acceptable Criteria: *Describe a measurable strategy to work with adult literacy services. If not applicable, a description must be provided for the absence of a program.*

The Southeast Regional Resource Center and the Vocational Training Resource Center, run by the Central Council of Tlingit & Haida Indian Tribes of Alaska, provide training for adults seeking GEDs and literacy skills. Both agencies are located in the Juneau community and partner with the Juneau School District on a number of different initiatives.

(D) Professional Development

Plan for Ongoing & Sustainable Professional Development

Element: *The district will provide ongoing, sustainable professional development for teachers, principals, administrators, and school library media personnel to further the effective use of technology in the classroom or library media center.*

Acceptable Criteria: *Plans for the professional development program are clear. Technology professional development includes training in some content areas. A staff technology needs assessment survey is used which can be part of a needs assessment for Title IIA. Specific strategies will be identified for assessment of skills in technology of all certified personnel on an annual basis.*

A teacher technology needs assessment survey was conducted in March of 2011 to help develop the professional development goals and action steps of this plan. Results of the needs assessment can be found in Appendix D. Additionally, Atomic Learning will be utilized at the start of the 2011-12 School Year to assess all certified personnel 21st Century Technology Skills and provide an avenue of support for individualized learning. In the remaining two years of the plan, the ISTE NETs for Teachers will be utilized to establish benchmarks to assess teachers' technology skill levels. The following section will detail our specific plans for the professional development program.

Element: *The district will ensure that teachers are prepared to integrate technology effectively into curricula and instruction.*

Acceptable Criteria: *Description of strategies to improve the capacity of teachers to integrate technology across several academic content areas in the three-year time period is included.*

Professional Development Strategies

Goal: On-going professional development opportunities and workshops will be provided to increase the technological skills of all staff.

Action Steps:

A) Provide targeted professional development workshops with a minimum of 30 staff members from each site in technology integration for raising achievement in Math and Literacy.

B) Develop a cadre of Technology Integration Experts (Librarians and identified technology integration teacher leaders at each site) who can share their knowledge, mentor, and provide guided practice of integrating technology in the core content areas.

C) Utilize instructional coaches at K-12 to improve teachers' capacity to integrate technology into their classrooms with student achievement as the goal.

Timeline of Activities

2011-2012 School Year:

- Using Atomic Learning's 21st Century Skills Teacher Assessment (to be taken by teachers at the first inservice day, August 19, 2011), the Teacher Technology Skills Survey feedback (given in March of 2011), and Principal feedback, targeted direct staff development workshops will be developed for each site using pull-out and substitute teachers. Each workshop will train no fewer than 30 staff members in current and emerging technologies for integration into classroom lessons including math, reading, and writing. Teachers will also be able to utilize the training modules in Atomic Learning on an individual basis.
- A cadre of technology integration experts (TIEs) will be identified at site levels starting with librarians to increase their capacity and pedagogy skills for 21st Century Teaching and Learning. The librarians and TIEs will meet on a regular basis to receive professional development in integrating 21st Century skills into the classroom using a framework of the ISTE NETs for Students and Teachers, the 21st Century Fluency Project, and the 21st Century modules and trainings available through Atomic learning. Dissemination of skills, knowledge, and teaching strategies will take place in site-based learning opportunities such as the Professional Learning Communities, staff meetings, and before or after school mini-workshops.
- The Juneau School District is moving to an instructional coaching model in grades K-12 to enhance instructional practices at the classroom level, raise student achievement,

- and strengthen teacher confidence in meeting the needs of diverse learners. The coaches will be expected to have demonstrated a knowledge and use of a rich array of effective instructional approaches, resources, and technologies. The coaches will work in classrooms with teachers (e.g. modeling, observing/reflecting, post observation discussions) with an emphasis on raising student achievement in math and literacy. When appropriate, the instructional coaches may work with staff at increasing their ability to integrate technology into their instructional practices.
- The Juneau School District will be hosting the Statewide Literacy Conference in October of 2011 with an expectation that all JSD certified staff be in attendance. The theme of the conference is “Digging Deeper: Mining for Meaning” and will include strands that incorporate literacy strategies into content areas. Examples include workshops on phonics, phonemic awareness, fluency, and comprehension at K/1 levels; vocabulary awareness, fluency, and comprehension at 2/3 levels; vocabulary development and comprehension development in content areas at 4/5 levels; and vocabulary analysis and comprehension in content area reading at 6-12 levels. Workshops will also include integration in technology, art, health, music, and drama.
 - Finalize Integrated Librarian Curriculum focused on a unified research model for K-12 and based on the American Association of School Librarians [Standards for the 21st Century Learner](#) and the [21st Century Fluencies Project](#).
 - Using multiple sources of data (such as teacher surveys, classroom observational data of instructional practices, and Standards Based Assessments) and evaluation of the impact of professional development will take place in the Spring of 2012 to make adjustments and plan appropriately for the following school year.
 - Disseminate data from innovative uses of technology that have resulted in increased student achievement (particularly by diverse learners) to the instructional staff and leadership.

2012-13 School Year:

- Using the ISTE NETs for teachers (see appendix D), benchmarks will be established to assess teachers’ technology skill levels.
- Focus on integrating/aligning resources to core standards in literacy and math and building on the previous year’s work, all teachers will integrate dynamic and/or emerging technologies into at least one unit.
- Continue the use of a cadre of technology integration experts and librarians to improve capacity of staff to integrate 21st Century Skills into content areas.
- Continue using instructional coaches to enhance instructional practices through technology at the classroom level, raise student achievement particularly among diverse learners, and strengthen teacher confidence in meeting the needs of diverse learners.

- Using multiple sources of data (such as teacher surveys, classroom observational data of instructional practices, and Standards Based Assessments) and evaluation of the impact of professional development will take place in the Spring of 2012 to make adjustments and plan appropriately for the following school year.

2013-14 School Year:

- Including the activities from 2012-13 School Year, focus on integrating technology across all content areas where appropriate.

Additionally, the Juneau Borough School District is a partner with [Alaska's Learning Network](#) and will support teachers and Principals who utilize AkLN's professional development platform. Three staff members for the Juneau School District participated in the first ITLP (Individualized Technology Learning Plan) Cohort in February of 2011 and will be completing their plans by June 30th, 2011. The Juneau Borough School District will encourage teachers to take advantage of additional opportunities provided by Alaska's Learning Network.

(E) Resources

Element: *The district will coordinate federal, state, local, and other funding sources to support student academic achievement, technology literacy, and integration of technology into curricula and instruction.*

Acceptable Criteria: *Description of how the district will coordinate activities funded through the Ed Tech Program (Title II-D) with technology-related activities supported with funds from other sources.*

The district will coordinate federal, state, local, and other funding sources to support student achievement, technology literacy, and integration of technology into curricula and instruction.

The Juneau Borough School District will reference online sources and current professional trade journals to inform decision making related to technology. The district will continue to partner with local resources, such as the Capital City Libraries, University of Alaska Southeast, South East Regional Resource Center, Apple Computer Training, the Alaska Learning Network, and Vocational Resources Training Center to further our goals for integrating technology throughout the classroom.

The Juneau Borough School District will continue to seek funding opportunities from state, federal, and municipal sources to expand and further integrate technology into teaching and

learning. For example, the district could seek on its Capital Improvements Project 6 Year Plan a bond issue to renew technology.

The Juneau Borough School District has utilized and will continue to apply these resources to support district-wide technology and career and technical programs at the high school level including: Alaska Department of Education and Early Development NCLB funds for intervention software licensing, staff development and training, targeted technology integration support, coaching, and mentoring, and additional hardware; General Operating funds for telecommunications, and matching grants with the 1 to 1 Laptop Consortium for Digital Learning projects, the 21st Century Grant program to fund an extended school-day learning option and purchase additional technology resources, General Operating funds for Technology Innovative Mini-Grants, individual site budgets for specialized software, additional classroom hardware (computers, digital projectors, document cameras, and related supplies), Carl Perkins Grant, Juneau Construction Academy, Alaska Department of Labor and Workforce Development Grants to enhance existing career and technical program offerings at JDHS and TMHS.

Element: *The district will ensure the supporting resources to ensure successful and effective uses of technology.*

Acceptable Criteria: *Description of the supporting resources, such as services, software, other electronically delivered learning materials and print resources in the inventory and to be acquired.*

All Juneau Borough School District staff and students have access to the following services:

- Internet access service
- District level and School/Program level Web pages for dissemination of information, events, and announcements; additionally teachers can create individual classroom Web pages upon request
- Access online to all the Juneau School Board adopted curriculum and School Board Policies and Regulations via the JBSD Website
- Increased communication services through *School Messenger*
- An online student information system (*Powerschool*)
- Access to a school district issued e-mail account (automatic for all staff; students may be issued a JBSD e-mail account with parental permission)
- Access district-level subscriptions to online resources such as *Classzone.com*, *Atomic Learning*, and *World Book Online*

All Juneau Borough School District staff have access to the following services:

- Access to resources for making data-driven decisions in individualized instruction through NWEA's Online Reports portal
- Access to student assessment history through the online student information system (*Powerschool*)
- Access to resources for formative and/or summative assessment tools in reading, writing, and mathematics such as the Anchorage Item Test Bank, the Alaska Computerized Formative Assessment System, and locally developed core assessments in mathematics

The following is a list of available software and electronically delivered resources utilized in multiple sites and/or programs in the Juneau Borough School District. Annual Subscription means it is currently in place and intended to be acquired for the upcoming school year. The list does not include specialized software or services purchased by individual school sites, and/or classroom teachers.

Item	Format	Funding	Purpose
Adobe Creative Suite	Software	Purchased	Design software for High School Students
All the Right Type	Software	Purchased	Keyboarding curriculum
Atomic Learning	Web-based	Annual Subscription	Online tutorials and resources for technology integration
Classzone.com	Web-based	Purchased	Online secondary mathematics resources supplementing the adopted curriculum
Destiny	Web-based	Purchased; Annual Subscription for tech support	Database for library resources
E-mail	Web-based interface	Annual Subscription	Communication
Fast ForWord	Software	Purchased/Annual Subscription for Tech Support	Language and learning skill intervention program
Filemaker Pro	Software	Purchased	Database
Final Cut Studio 2	Software	Purchased	Video editing software for Middle School and High School programs
iLife 06 - 11	Software	Purchased	Creativity tools for the Mac platform

iWork 06 - 09	Software	Purchased	General Productivity
Microsoft Office	Software	Purchased	General Productivity
PLATO	Web-based	Annual Subscription	Credit Recovery
PowerSchool	Web-based	Purchased; Annual Subscription for tech support	Student information system
Read and Write Gold	Software	Purchased	Assistive technology for literacy acquisition
SuccessMaker Mathematics	Software	Purchased; Annual Subscription for tech support	K-8 Mathematics intervention tool currently in place at Middle Schools
WorldBook Online	Web-based	Annual Subscription	Reference Material

Element: *The district will maintain an inventory of technology including provisions for interoperability.*

Acceptable Criteria: *Description of the type and costs of technology to be acquired with Ed Tech funds. (Title II-D). Description of how the district will gather information to meet the computer count requirement on an annual basis.*

In the future, Title II-D funds will no longer be used to acquire technology as 100% will go towards staff development costs to pay for substitutes while staff participate in workshops centered around technology integration for improvement in literacy and mathematics in connection with the JSD Strategic Plan.

During the 2009-2010 school year a web-based Work Order system was developed. Part of this effort was to provide an accurate inventory for computer assets for the District. During the summer of 2010 a hands-on inventory of every computer asset in the District was performed and key information was logged into this database. To keep this inventory current and accurate, IT Staff centralized all IT purchasing for the District and ensure all assets are entered into this database. All adds, changes, or deletes to this inventory are handled by IT staff, and as a result the Juneau Borough School District can query this database at any time and have the most up to date and accurate information available on our computer assets.

(F) Accountability

Element: *The district will measure the effectiveness of integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to reach challenging state academic standards.*

Acceptable Criteria: *Description of the process and accountability measures that will be used to evaluate: a) integration of technology, b) increased ability of teachers; and c) ability of students to increase achievement.*

Element: *The district will measure the effectiveness of the educational technology plan and the district's progress toward meeting the plan's goals.*

Acceptable Criteria: *Description of the process that enables the district/schools to monitor progress toward the specified goals and make mid-course corrections in response to new developments and opportunities as they arise.*

Goal: To provide ongoing feedback for continuous improvement of technology with regard to technology curriculum, hardware, software, and building infrastructure

Evaluation

Survey staff This plan recognizes the importance of regular communications among staff, with a need for ongoing information. This plan aims to establish an avenue for staff feedback regarding the accomplishments and opportunities for improvements of this plan to the JSD Technology Committee.

This survey would ask for and provide:

- Feedback in the form of several questions about how technology is working for individuals and if the plan aligns with on-site reality, especially with technology integration, reliability of infrastructure, responsiveness of centralized tech support, increased technology abilities of teachers, increase (or decrease) in technology application in the classroom, and ability of students to increase achievement;
- Assessment of staff's familiarity with the plan

The first year's survey would emphasize awareness of the plan and solicit additional staff development needs not otherwise addressed. The survey would need to gauge staff and student infrastructure, as it supports the Tech Plan goals. In addition:

- The Administrative Technology point person will ensure local site committee meetings occur on an annual basis to provide cohesion among sites, and to collect additional evaluation data.
- Monthly District-wide technology meetings will occur with representation from each school and/or program.

Action steps:

1. Continue clear communications between the JSD Tech Committee, site tech committees, and school district administration to ensure the continuity and collaboration of technology goals.

Timeline: Ongoing

Element: *The district will provide a list of persons involved in crafting this plan.*

Acceptable Criteria: *Representatives of the following five groups are included: administration, teachers, students, community and staff.*

The stakeholders listed on pages 4-5 of this plan included members who were administrators, teachers, students, community, and staff.

Element: *Technology Plan Review.*

Acceptable Criteria: *Processes for periodic review of district needs and revision of the plan.*

Technology Plan Review

- The ongoing JSD Technology Plan (including goals and activities) will be clear and concise for staff overview
- The JSD Technology Team will compile reports with the JSD Technology Committee.
- Consult with other districts, state, local, and federal agencies at the Alaska Association for Technology in Education conference (ASTE) in February of each year
- JSD Technology Committee revises plan annually by April according to information gathered at this conference, focus meetings on the plan itself, and relevant data.
- Rework the revised plan in May, communicate plan revisions to the school board and district staff
- Submit the plan and annual addendum to the Alaska Department of Education and Early Development according to their requirements.

Addenda to the Technology Plan

With each round of evaluation, the district will create an addendum to the plan:

- In order to make the plan a living document, it should be available in electronic format (Wiki, Weblog, or other content management system) for comment and revision.

Action steps:

1. Survey staff focusing on Tech Plan awareness with secondary focus on reliability of technology to meet the goals of the plan.
2. Survey students to see if they are increasing their use of technology for school purposes.
3. Administrative Technology point person ensures site technology committee meetings happen annually; establishes the district roles for site committees;
4. Establish partnerships with district(s) with parallel goals; collaborate with attendees at ASTE Conference
5. District Technology Committee examines survey data, reviews the plan, and determines the focus for the following year.

Timeline:

- Spring '11 – Technology Committee drafts potential survey
- Start of school – communication of plan to site staff meetings
- Fall '11 – Technology Committee reviews initial data from survey; advise roles for addressing needs
- Ongoing – Assistant Superintendent or designee liaisons with site committees
- Feb '12 – JSD representatives attend ASTE to collaborate
- Spring '12– follow-up survey with staff: JSD Technology Committee reviews data and determines focus of the plan for the '12-13 school year.

(G) CIPA

Element: Technology Protection Measure: *Specific technology has been identified that will be used to **block or filter** Internet access. It must protect against access by adults and minors to visual depictions that are obscene, child pornography, or - with respect to use of computers with Internet access by minors - harmful to minors. **It may be disabled for adults engaged in bona fide research** or other lawful purposes.*

Acceptable Criteria: *Description of the technology measure that the district has in place and how the measure can be disabled for adults engaged in bona fide research for lawful purpose.*

The Juneau Borough School District uses a dedicated firewall appliance (SonicWall NAS-3500) to filter all inbound Internet Traffic. The District subscribes to a Content Filtering Service (CFS), which provides a baseline of filtering and configuration. Obscene images, child pornography, and content harmful to minors are blocked by both URL and key words. District IT Staff constantly monitor and update blocking and filtering.

A secure content filter bypass is provided for teachers and administrators to access legitimate content that might otherwise be filtered for bona fide research. The content filter bypass is accessed with a secure login and password provided only to adult staff members with explicit instructions that it is intended only for adult use. The filter bypass times-out after 90 minutes and a user must log back in to reestablish the filter bypass.

Element: *The Internet Safety Policy addresses the following issues:*

- a) access by minors to inappropriate matter on the Internet and World Wide Web;*
- b) the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications;*
- c) unauthorized access, including so-called "hacking," and other unlawful activities by minors online;*
- d) unauthorized disclosure, use, and dissemination of personal information regarding minors; and measures designed to restrict minors' access to materials harmful to minors.*

Acceptable Criteria: *Description of the Internet safety policy that addresses all the items outlined and includes the monitoring of online activities of minors.*

The Juneau Borough School District has established School Board policies and regulations regarding Computer Usage and Electronic Information Networks. A full copy of all the policies and regulations for each topic can be found at the following links:

- Policy 1530 - Electronic Information Networks: <http://www.juneauschools.org/board/policy/1530>
- Policy 1540 - Computer Usage:
<http://www.juneauschools.org/board/policy/1540>

Before students utilize electronic information networks or computers, a student and parent must sign an acceptable use policy form and permission to publish. This document must be filed during registration or at the start of school. The individual school sites are currently responsible for distributing and obtaining the acceptable use policy and permission to publish forms. The acceptable use forms describe the board policies and regulations mentioned above. A current copy of the permission to publish form is available in Appendix G. The form will be undergoing some changes and the process streamlined to include as a field in PowerSchool, our student information system.

The following portions of the Juneau Borough School District's policies relating to Internet Safety have been highlighted below:

Policy 1540 - Computer Usage

The Juneau School District believes that computers and electronic communication technology are important educational tools. The district provides students, faculty and staff with access to computers and electronic information resources for educational and operational purposes.

Use of any of the district's technology is a privilege and not a right. Each student/teacher/staff member is expected to use the district's computer technology in an appropriate manner, which requires that use be efficient, ethical, and legal. The Superintendent shall develop regulations governing student and staff use of the district's computers and electronic communication resources.

Failure to abide by the regulations adopted pursuant to this policy may result in termination of the offender's privilege to use the district's computer technology and/or other disciplinary measures appropriate to the offense.

Policy 1540 - Computer Usage Regulation I. Appropriate Uses

In addition to any other uses that are not appropriate or which would violate the guidelines in these regulations, the district strictly prohibits and will not tolerate any use of its technology for activities related to the

- a) violation of any local, state or federal law;
- b) access, receipt, display, or transmittal of any pornographic or lewd information or access by minors of any material that is “harmful to minors” as defined in the Children’s Internet Protection Act;
- c) access, receipt, display or transmittal of information pertaining to the construction, manufacture or use of weapons, injurious devices, or toxic, poisonous or injurious substances except in the context of an approved educational or operational activity;
- d) participation in or organization of gambling;
- e) solicitation of or transaction of personal business or other profit-making activity, except in the context of an authorized educational activity;
- f) promotion of local, state, or national political causes or candidates;
- g) promotion of religion or religious activities;
- h) harassment or degradation of any individual or group;
- i) release of personally identifiable information about a student in violation of the district’s student records policy and regulations;
- j) unauthorized access of computer files, websites or systems, whether internal or remote or any other form of computer “hacking”.

Policy 1530 - Electronic Information Networks

Regulation: Internet Procedures

In order to safeguard student access to the Internet:

- Building principals will take measures to protect the safety and security of students when using e-mail, chat rooms and other forms of direct electronic communication;
- Students shall receive instruction on appropriate Internet use, which shall include cautions against disclosing personal information in public forums or arranging to meet in person with individuals whom students have “met” only on-line in the absence of appropriate assurance that the disclosure or meeting is safe.
- The disclosure, use, and dissemination of personal information regarding students must be in compliance with Juneau School District Board Policy 5770, Parent and Student Right of Privacy and Board Policy 8330, Student Records; and

- Access to material deemed a) obscenity, b) child pornography, or c) “harmful to minors” as that term is defined in the Children’s Internet Protection Act shall be restricted by Internet filtering software or other technologies.
- The district shall monitor the online activities of students using the district’s computer network, through direct observation and/or technological means, in an effort to prevent student access of restricted materials and other inappropriate use of the district’s computer resources.

In addition to the above policies, the Juneau School District utilizes the iSafe Curriculum for educating K-12 students on age appropriate Internet Safety topics. The iSafe Curriculum is integrated into health and science classes at the middle school and high school levels with reinforcement from the librarians/media specialists. At levels K-5, the curriculum is implemented through the elementary librarians/media specialists and counselors. A copy of the scope and sequence is found in the Appendix.

Recommendation

The feedback from stakeholders indicated a need to examine our policies, regulations, and network agreements to account for students who bring their own technology to school for educational purposes, as well as other issues arising with emerging technologies such as cyber bullying and other forms of inappropriate digital communication.

Element: Public Notice and Hearing

The authority with responsibility for administration of the school or library has provided **reasonable public notice** and held at least **one public hearing** to address a proposed Technology Protection Measure and Internet Safety Policy.

Acceptable Criteria: Documentation of the public notice and agenda/minutes of the public hearing to address the Technology Protection Measure and Internet Safety Policy within the last three years.

A notice for a Public Forum on Technology in the Juneau School District was made available to the community on March 4th, 2011. The following announcement was made using the District Website, E-mailing a District-wide parent list, and Public Service Announcements on local radio stations:

Public Service Announcement

Public Forum on Technology

March 4, 2011

The community is invited to attend a *Public Forum on Technology in the Juneau School District* on Wednesday, March 9, 2011. There are two meetings to choose from:

12:00 noon in Room 154 of the Bill Ray Center, or
6:00 pm in the Thunder Mountain High School Library

The purpose of the forum is to share some of the goals that will be included in the district's next 3-year technology plan and to gather public input on:

1. Student use of technology, given the uniqueness of the Juneau Community; and
2. Internet content filtering practices, both those that are required by law and those required by the JSD filtering policy.

Written input forms are available in the Announcements section of the district website at www.juneauschools.org, or by contacting the John Wahl, Instructional Technology Coordinator, 523-1724 or john_wahl@jsd.k12.ak.us.

Written feedback must be received by Friday, March 11, 2011. For more information see the Announcements section at www.juneauschools.org or call John Wahl at 523-1724.

The agenda for the meeting is as follows:

- Children's Internet Protection Act Compliance and Content Filtering
- Questions and Feedback
- Internet Safety Policy
- Questions and Feedback
- Goals and Objectives in 3-year Technology Plan
- Questions and Feedback

The sign-in sheets, presentation, and results from public feedback can be found in Appendix G.